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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,571	06/24/2003	John Ziavras	PD-02-1026	1966
22462	7590	02/23/2005	EXAMINER	
GATES & COOPER LLP HOWARD HUGHES CENTER 6701 CENTER DRIVE WEST, SUITE 1050 LOS ANGELES, CA 90045			KIM, SANG K	
			ART UNIT	PAPER NUMBER
			3654	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,571

Applicant(s)

ZIAVRAS ET AL.

Examiner

SANG KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Objections

Claims 2-3 and 17-18 are objected to because of the following informalities: the phrase, "between storage spool" should be –between the storage spool. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-11, 14-21, 23-26 and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoyt et al., U.S. Patent No. 6173922 B1.

With respect to claims 1 and 16, Hoyt '922 shows a storage spool (2601) mounted on the spacecraft (page 18, line 20); an output spool (2606) mounted on the spacecraft; and a flexible material (i.e. hoytether 2504) having a first end (near 2601) coupled to the storage spool and a second end (near 2606) coupled to the output spool, wherein a length of the flexible material is distributed between windings of the storage spool (2601) and the output spool (near 2606) to adjust mass properties of an attached structure (the spacecraft will have a different center of gravity or anything that the spacecraft is attached to, when the flexible material is wound around the storage spool completely or more than the output spool and vice versa), as shown in figure 26.

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With respect to claims 2 and 17, Hoyt '922 shows a direct path between the storage spool (2601) and the output spool (2606), as shown in figure 26.

With respect to claims 3-5 and 18-20, Hoyt '922 teaches the flexible material can have an indirect path between the storage spool (2601) and the output spool (2606), wherein the indirect path is formed by one guide using an external roller or guides, as explained on page 16, lines 34-35.

With respect to claims 6, 8-10, 15, 21, 23-25 and 30, Hoyt '922 shows the storage spool is spring loaded to wind the flexible material onto the storage spool, as explained on page 18, lines 1-5.

With respect to claims 11, 14, 26 and 29, Hoyt '922 teaches a motor assembly for winding the flexible material, as explained on page 1, lines 47-65.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 12-13, 22 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoyt et al., U.S. Patent No. 6173922 B1, in view of Clarke, U.S. Patent No. 3151704.

With respect to claims 7 and 22, Hoyt '922 does not describe detailed spool structures having one or more latches.

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Clarke '704 shows one or more latches (26, 36) to prevent the flexible material (24, a metal ribbon spring/wire) from disengaging the storage spool (20) or the output spool (near 14), as shown in figures 1-4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hoyt '922 by adding one or more latches as taught by Clark '704, to add a safety measure when winding and unwinding.

With respect to claims 12-13 and 27-28, Hoyt '922 does not show a gear assembly with respect to the motor.

Clarke '704 shows a gearhead (48) with a motor assembly (not shown, near 46) where a motor would be connected to drive the spindle (14) and when it is not powered up, it allow the flexible material (24) to wind onto the storage spool, as shown in figure 4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hoyt '922 by using a stepper motor using a gear assembly as taught by Clark '704, to show that other motors can be used and not limited to a particular motor.

Response to Arguments

Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The added recitation that the apparatus is mounted on the spacecraft necessitated the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG KIM whose telephone number is 703-305-3712. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:30 P.M. alternating Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki, can be reached on (703) 308-2688. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SK

2/9/05


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